CLAIMS

What is claimed is:

1. An apparatus, comprising:

an enclosure having a fluid inlet and a fluid outlet in fluid communication with the fluid inlet; and

a channel structure inside the enclosure between the inlet and the outlet defining a plurality of radial flow paths.

2. The apparatus of claim 1, wherein the enclosure comprises a lid member and a base member, and wherein the channel structure comprises:

a plurality of cooling fins disposed between the lid member and the base member, the fins defining a set of channel walls which form radial flow paths from an impingement point radially outward to a perimeter of the enclosure.

3. The apparatus of claim 2, wherein the impingement point is centrally located with respect to the fins.

4. The apparatus of claim 2, wherein the impingement point is offset from a central region of the fins.

5. The apparatus of claim 2, wherein the impingement point is located at a position corresponding to an expected relatively hotter spot of a heat source.

6. The apparatus of claim 1, wherein an impingement point for cooling fluid in the enclosure is located at a position corresponding to an expected relatively hotter spot of a heat source.

7. A method, comprising:

providing an enclosure having a fluid inlet and a fluid outlet in fluid communication with the fluid inlet; and

forming a channel structure inside the enclosure between the inlet and the outlet defining a plurality of radial flow paths.

8. The method of claim 7, wherein forming the channel structure comprises:

disposing a plurality of cooling fins disposed between a lid member and a base member, the fins defining a set of channel walls which form radial flow paths from an impingement point radially outward to a perimeter of the enclosure.

9. The method of claim 8, further comprising:

locating the impingement point centrally with respect to the fins.

10. The method of claim 8, further comprising:

offsetting the impingement point from a central region of the fins.

11. The method of claim 8, further comprising:

locating the impingement point at a position corresponding to an expected relatively hotter spot of a heat source.

12. The method of claim 7, further comprising:

locating an impingement point for cooling fluid in the enclosure at a position corresponding to an expected relatively hotter spot of a heat source.

13. A system, comprising:

an electronic component; and

a cold plate thermally coupled to the electronic component, the cold plate comprising:

an enclosure having a fluid inlet and a fluid outlet in fluid communication with the fluid inlet; and

a channel structure inside the enclosure between the inlet and the outlet defining a plurality of radial flow paths.

14. The system of claim 13, wherein the enclosure comprises a lid member and a base member, and wherein the channel structure comprises:

a plurality of cooling fins disposed between the lid member and the base member, the fins defining a set of channel walls which form radial flow paths from an impingement point radially outward to a perimeter of the enclosure.

15. The system of claim 14, wherein the impingement point is centrally located with respect to the fins.

16. The system of claim 14, wherein the impingement point is offset from a central region of the fins.

17. The system of claim 14, wherein the impingement point is located at a position corresponding to a relatively hotter spot of the electronic component.

18. The system of claim 13, wherein an impingement point for cooling fluid in the enclosure is located at a position corresponding to a relatively hotter spot of the electrical component.

19. The system of claim 13, further comprising:

a heat dissipation device coupled to the cold plate by a loop of tubing;

cooling fluid disposed in the tubing; and

a pump adapted to circulate the cooling fluid.

20. The system of claim 19, further comprising:

a fan adapted to provide cooling air to at least one of the heat dissipation device and the cold plate.